

MEMORANDUM FOR Biologist, Operations Division (CENWP-OD)

SUBJECT: Bonneville Project, Fishway and Fish Activities for Week 12 of 2015, which covers the period from 15 to 21 March 2015.

1. OPERATION SUMMARY:

a. Daily average river flows ranged from 145.9 to 212.0 kcfs. Daily average powerhouse forebay elevation ranged from 73.9 to 74.6 msl. Daily average project tailwater ranged from 13.6 to 17.5 msl. Secchi disk measurements ranged from 5.0' to 7.0'. Daily average water temperature ranged from 44 to 46°F this week.

b. Spill Bays 01 and 18 are open during daytime hours to provide attraction flow for Cascades Island and B-branch, respectively. Daily average spill ranged from 1.2 to 1.3 kcfs.

(1) Spill bay 01 was on sill from 1057 to 1130 on 17 March for electrical maintenance on the hoist.

c. Unit Operation. Powerhouse two became the priority powerhouse on 01 March. Main unit draw downs are measured every Monday and more frequently as needed.

(1) Table 1. Unit Outages.

Unit	OOS Date	RTS Date	Reason
1	1334 on 16 Mar	1705 on 16 Mar	Raking trash
2	1248 on 18 Mar	1526 on 18 Mar	Raking trash
3	0807 on 18 Mar	1252 on 18 Mar	Raking trash
10	0934 on 16 Mar	1331 on 16 Mar	Raking trash
14	0701 on 17 Mar	1115 on 17 Mar	Raking trash
14	1241 on 17 Mar	1313 on 17 Mar	FGE mods
15	1000 on 10 Feb	---	4 year overhaul

d. Fish Units. Second Powerhouse fish units provide attraction flow for the Washington Shore (WS) fish ladder. The units may be placed on standby, as necessary, during nighttime hours to float debris. Gatewell drawdowns are measured daily.

(1) Table 2. Fish unit drawdowns, in feet.

Date	F1	F2
3/15	0.2	0.2
3/16	0.2	0.3

3/17	0.5	0.5
3/18	0.3	0.4
3/19	0.2	0.3
3/20	0.5	0.4
3/21	0.1	0.1

2. ACTIVITIES:

- a. Auxiliary Water System Closures. No closures this week.
- b. STS/VBS inspections. No inspections occurred this week.
- c. Dewatering and Fish Salvage. No dewaterings or fish salvages this week.

3. RESEARCH:

- a. CRITFC – Sea Lion hazing. Hazing by boat began on 6 March and will continue through May.
- b. Fisheries Field Unit – Sea Lion Observations. Observations commenced on 13 January and will continue through 29 May.
- c. NOAA – FGE testing. Biological testing of the flow control plate installed in the Unit 15-A gatewell is scheduled to begin on 1 April using subyearling Chinook. Testing in 15-C will occur in May. Review the FFDRWG update form [here](#).
- d. Normandeau – Fish Counting. Video monitoring continues.
- e. PSMFC – Smolt Monitoring Program. Juvenile fish condition and index monitoring continues. The sample collection system was out of operational service from 0913 on 16 March to 0700 on 17 March for repairs to sample flume. No research fish were collected this week. These fallbacks were recorded crossing the separator bars: 4 steelhead. More details can be found on the [FPC web page](#).
- f. USDA – Sea lion and avian hazing. Land-based hazing began on 18 March.

4. FISHWAYS:

- a. Project biologists inspected 15 – 21 March.
- b. Fish passage plan observations.
 - (1) Table 4. FPP out of criteria items.

Date	Location	FPP Items	Cause	Response
BRADFORD ISLAND				

3/15-16,18-20	A-branch	Weir water level > 1.1'	Suspected FV3-7 conduit leak	None
CASCADES ISLAND – Nothing to report				
WASHINGTON SHORE – Nothing to report				

(2) WG-1, one of the south PH1CC entrances, experienced a gate failure on 17 November. The gate fell and the picking beam fell into the water. WG-2 has been closed to improve entrance differentials. Repairs will require the ITS to be closed and are being coordinated for August, 2015.

(3) A-branch diffuser FG3-3 is mechanically bound. Repairs are not possible until A-branch is dewatered below tailwater during the 2015/16 winter maintenance period.

(4) PH2CC diffuser A2 was unable to be repaired during winter maintenance and remains closed. The gate for diffuser B5 was removed for repairs and therefore cannot be closed.

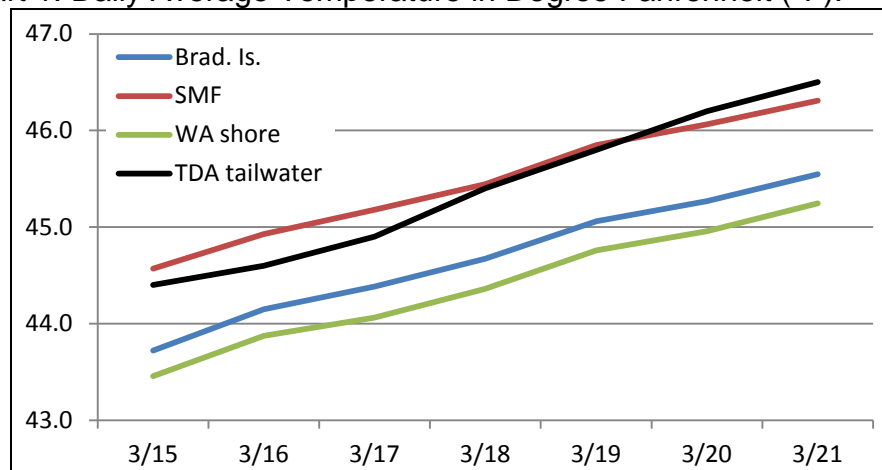
c. Fishway Temperatures. Temperatures are taken from 01 March through 30 November. Forebay temperatures can be found [online](#).

(1) Table 5. Daily Average Temperature in Degree Fahrenheit (°F).

Date	Fishways			TDA tailwater
	Brad. Is.	WA shore	SMF	
3/15	43.7	43.5	44.6	44.4
3/16	44.1	43.9	44.9	44.6
3/17	44.4	44.1	45.2	44.9
3/18	44.7	44.4	45.4	45.4
3/19	45.1	44.8	45.8	45.8
3/20	45.3	45.0	46.1	46.2
3/21	45.5	45.2	46.3	46.5

*The BON forebay temperature station was activated on 18 March.

(2) Chart 1. Daily Average Temperature in Degree Fahrenheit (°F).



d. Zebra Mussel Monitoring. No signs of colonization were observed this reporting week.

e. Adult Fishways.

(1) Calibration occurred on 19 March.

(2) 11 of 12 floating orifice gates (FOGs) are installed; one gate is out for maintenance. FOG SLEDs are installed.

(3) The SLEDs for the PH2 entrances were installed prior to the return of the Washington shore fishway. The Cascades Island SLED was installed on 01 March. PH1CC entrance SLEDs and the B-branch entrance SLED were installed on 04 March.

f. Juvenile Fishways.

(1) The south end gate of the Ice and Trash Sluiceway (ITS) was removed for repairs. Plating has been placed over the bottom of the guide slot to minimize fish impacts. Reinstallation dates are currently being coordinated for August, 2015.

(2) The hydro-cannon remains in service.

(3) The B2CC was opened at 1200 on 10 March.

(4) The DSM remains in service.

g. Lamprey Fishways.

(1) All LPSs remain out of service.

5. CONSTRUCTION:

a. Contractors replaced the flow-control plate in the gatewell of Unit 15A on 25 February. A new flow-control plate in the gatewell of Unit 15B was completed on 11 March. Review the FFDRWG update form [here](#).

b. The Navigational Lock went out of service at 1029 on 09 March for annual maintenance. It was returned to service at 1550 on 19 March.

6. HAZMAT, SPILLS AND CLEANUP: Nothing to report.

7. TELETYPES CURRENTLY IN EFFECT:

a. A teletype sent on 16 January provides updated BON tailwater operations for Chum incubation. Effective 1500 on 19 December until further notice, operate to maintain a minimum tailwater of 13.0' at all hours. This operation negates previous

Chum tailwater operation teletypes.

b. A teletype sent on 19 February updates the spill caps and lack of load conditions to be used from 19 February until further notice.

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